

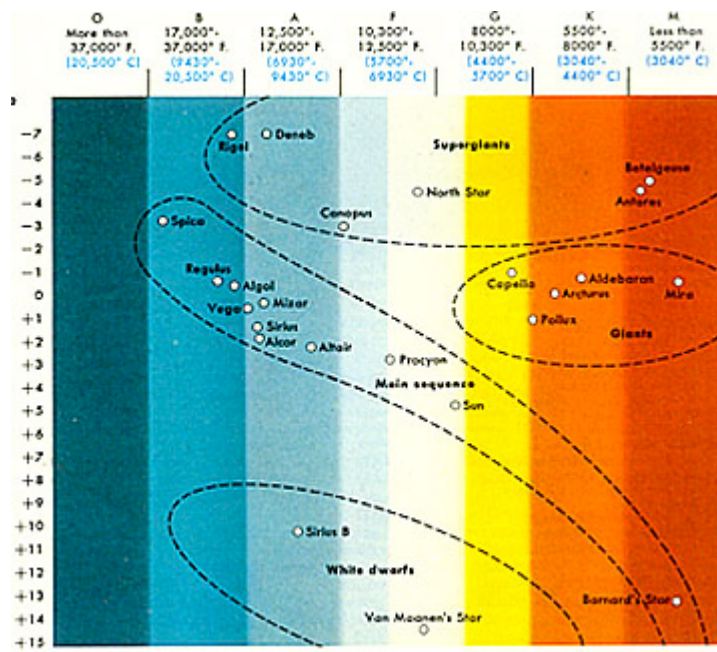
Stars

Made of gas and dust

Colors of stars and their temperature

Blue – hot temperature

Red and Yellow- cooler temperature

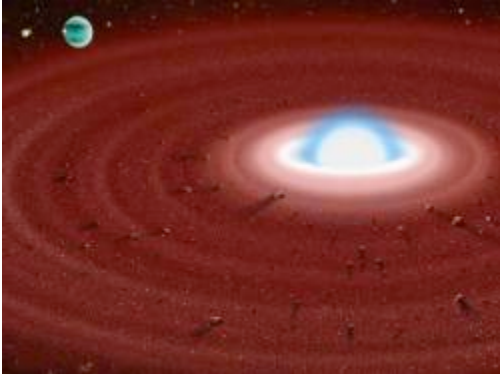


Composition

Inner layer- very dense and hot

Outer layer-(star's atmosphere)

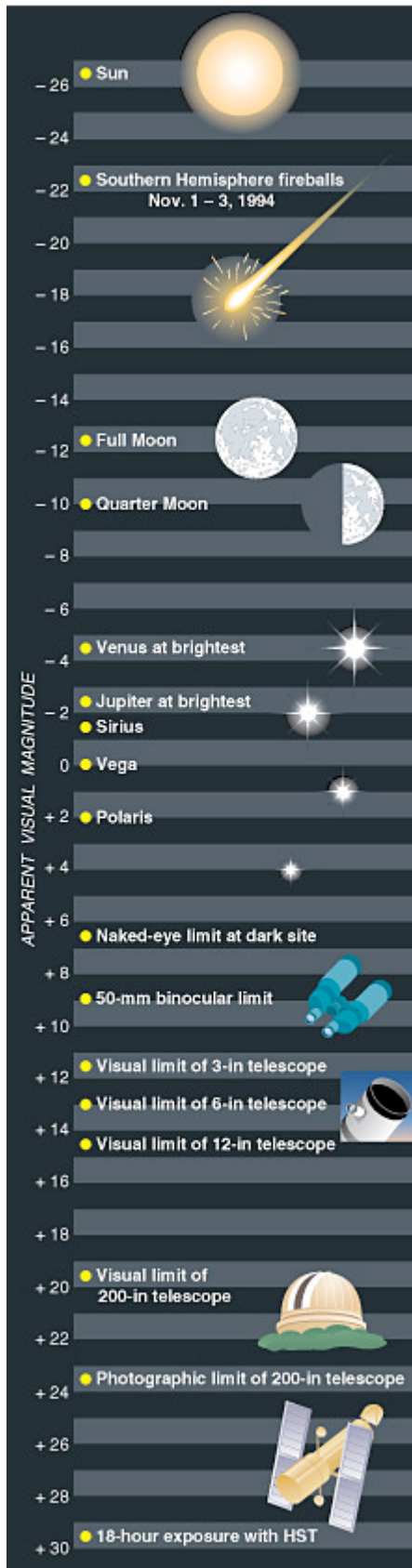
- *cool gases*
- *absorbs light from the star*
- *tells scientists what the star is made of*
- scientists use a **spectrograph** to break the stars light into an absorption spectrum and use the emission lines to find the stars composition and temperature



Classifying Stars

Scientists classify stars by:

1. Their temperature- from highest to lowest
2. Their brightness- positive numbers represent dimmer stars and negative numbers represent brighter stars.



Activity Use Pg 35

<http://www.fas.org/irp/imint/docs/rst/Sect20/img024.jpg>

1. What class star is the sun?
2. What color is a class M star?
3. What is the surface temperature of the star Vega?
4. What is the color of a star that contains calcium and other metals?
5. What is the class and surface temperature of a blue star?

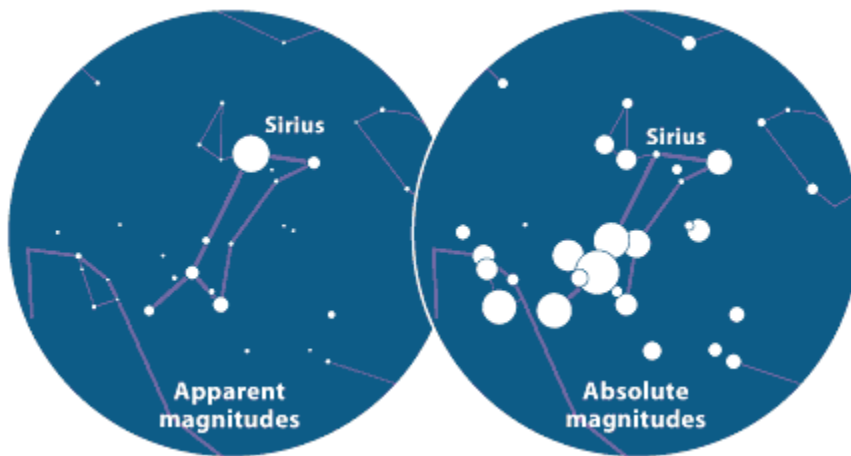
Different ways to find the brightness of stars

1. Apparent Magnitude

- the brightness of a star as seen from Earth
- some stars appear brighter because of their distance or their size

2. Absolute Magnitude

- the actual brightness of a star
- found by using a star's apparent magnitude and its distance from Earth.



Distance to the stars

- measured in light years
- scientists use a **star's parallax** (its apparent shift in position) and trigonometry (math) to find the distance of stars close to Earth

Motion of Stars

- Because the Earth revolves around the sun and each season the Earth faces a different part of the sky, we see different constellations during the year.
- Stars seem to move each night because of the Earth's rotation on its axis
- A star's actual movement is too hard to tell because they are so far away. It would take 1,000 years to observe their movement.

www.classzone.com/books/earth_science/terc/navigation/visualization.cfm